Maintaining Required Readiness While Enabling Cost Reduction Through Infrastructure Sizing and Shaping

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STRATEGIC PRIORITIES

OUTCOME

PROCESSES

ORGANIZATIONAL STRUCTURE

CONCEPT COMPARISON

Consumption Concept

- Centralized Approach
- More Work/Fewer Places Is Better
- Expand Capacity (In-source Work)
- Functionally Stove-piped (Enablers as Ends to Themselves)
- Supply Push Model
- Inventory Oriented
- Result: Cost Neutral

Best Practice Concept

- Customer (Fleet) Driven - Enterprise Controlled
- Work Required Where It Makes Best Business Sense (FRC/Logistics Center/Depot Partnerships, PBL's)
- Continuously Improving and Synchronous (AIRSpeed, Lean/Six Sigma/Theories of Constraints
- Fully Integrated – End To End
- Demand Pull Model
- Readiness Oriented
- Result: Managed Cost and Personnel Reductions

Gain Advantage Of Lean At The Nodes, And Take Advantage Of Cycle Time Reduction, Across The Enterprise To Take Greater Advantage of Continuous Reductions In People and Parts While Only Producing the Required Readiness – AND NO MORE

PERFORMANCE BASED LOGISTICS

Better Buying Power 2.0

"The basic goal of BBP, however, remains unchanged: deliver better value to the taxpayer and Warfighter by improving the way the Department does business … we must wring every possible cent of value for the Warfighters we support from the dollars with which we are entrusted by the American taxpayer."

Honorable Frank Kendall, Under Secretary of Defense

"Increase effective use of Performance-Based Logistics: There is sufficient data on the effectiveness of PBL at reducing cost and improving support performance to conclude that if it is effectively implemented and managed, PBL yields significant benefits. Key activities include increasing the knowledge base of PBL through standard processes, tools, and training."

Performance Based Logistics – Availability Benefit

Program	Availability Benefits	Program	Availability Benefits
F/A-18 FIRST	98% RFT	P-3 APS-137	+ 45%
F/A-18 SIMS	+ 32%	TOW-ITAS	99% Availability
H-60 FLIR	+ 67%	RC-12 FW A/C	+ 90%
Navy Tires	+ 17%	HIMARS	98.7% Availability
AEGIS FCS	+ 30%	C-12 FW A/C	+ 90%
F-404 Engine	+ 46%	TAIS	+ 98%
F-404 Eng MFC	+ 75%	Apache Sensors	+ 95%
T-700 Engine	+ 35%	AH-64D Cpnts	95% Availability
CIWS	+ 7%	F414 Cpnts	97% Availability
H-53 Compnts	+ 48%	H-60 FLIR	+ 67%
H-60 Tip-to-Tail	+ 14%	CAINS INS	99% Availability
H-46 Compnts	+ 12%	ALQ-126B	99.9% Availability
ALR-67(v)3	98% Availability	C-20 FW A/C	+ 96%

"Over the course of the past decade, a host of programs have publicly reported significant improvements in cost or performance attributed to the implementation of an outcome-based strategy."

Performance Based Logistics – Affordability Benefit

Program	CycleTime Benefits	Program	Total Cost Benefits
F/A-18 FIRST	- 74% LRT; - J533% RTAT	ALR-67(v)3	$62.7M (40%)
F/A-18 SIMS	- 84% LRT; -100% B/O’s	F/A-18 FIRST	$688M
H-60 Avionics	- 84% LRT	Sentinel	$139M
Navy Tires	- 92% LRT; - 100% B/O’s	Apache Sensors	$123M
Navy APUs	- 92% LRT	AN/AAS-44	$31M (25.2%)
LANTRIN	- 90% LRT	APUs	$10M (20.5%)
AEGIS FCS	-10% B/O’s	F405 Engine	$24M (17.2%)
T-700	- 74% RTAT; - 100% B/O’s	Navy Cockpit	$71M (16.5%)
AH-64 Apache	- 35% RTAT	LANTRIN	$9.6M (14.6%)
Chinook	Reduced RTAT	F-404 Engine	$79M (13.4%)
Chinook Blades	Improved LRT	Patriot	$1M (13.1%)
T-26T -28 APU	Reduced RTAT	AN/ALQ-126B	$2.1M
T-55 Engine	Reduced RTAT	AH-64D Apache	$100M

“The evidence is compelling. Performance has improved, and the preponderance of the evidence indicates costs have reduced as well.”

AIR*SPEED*

- **THREE AIR*SPEED* PROGRAMS**
  - **DEPOT AIR*SPEED* WHICH BEGAN IN 1999**
  - **ENTERPRISE AIR*SPEED* WHICH BEGAN IN 2003**
  - **NAVAIR AIR*SPEED* WHICH BEGAN IN 2004**
- **ALL THREE INCREASE PRODUCTIVITY THROUGH PROCESS IMPROVEMENT BY USING A COMMON SET OF INDUSTRY-PROVEN TOOLS**
- **<u>NOT</u> LEAN AS AN "END" TO ITSELF**

LEAN, SIX SIGMA, TOC

DEPOT

- **DEPOT PRODUCTION PROCESSES**
- **LED BY CO'S / AIR-6.0**
- **ROLLOUT TO 3 SITES**

ENTERPRISE

- **FLEET-WIDE REPAIR SITES & PROCESSES**
- **LED BY O-6 ESC**
- **O-I-D + SUPPLY CHAIN**
- **LINKS TO NAVRIIP**

NAVAIR

- **CORPORATE / COMPETENCY PROCESSES AND OTHER PRODUCTIVITY INITIATIVES**
- **LED BY AAG / EDB**
- **ENABLED NAVAIR AIR*SPEED* CORE TEAM**
- **LINKS WITH ENTERPRISE & DEPOT AIR*SPEED***

Product Enterprise Team
Example: F-404 Capacity Reduction
(Pre-Cursor to Fleet Readiness Centers)

- FY03 State was 9 Intermediate Maintenance Activities with excess capacity and manpower

- 37 Options Considered, 7 selected for detailed evaluation w/AIRSpeed application, ie. TOC, Lean, Six Sigma where appropriate

- Team Recommendation was:
  - Phased down approach from 9 (FY04) to 5 I-Levels in FY05 to 3 in FY06

- Starting Basic Allowance was 480 billets and COB was 359 personnel
  - End state became167 military personnel & 8 tech reps

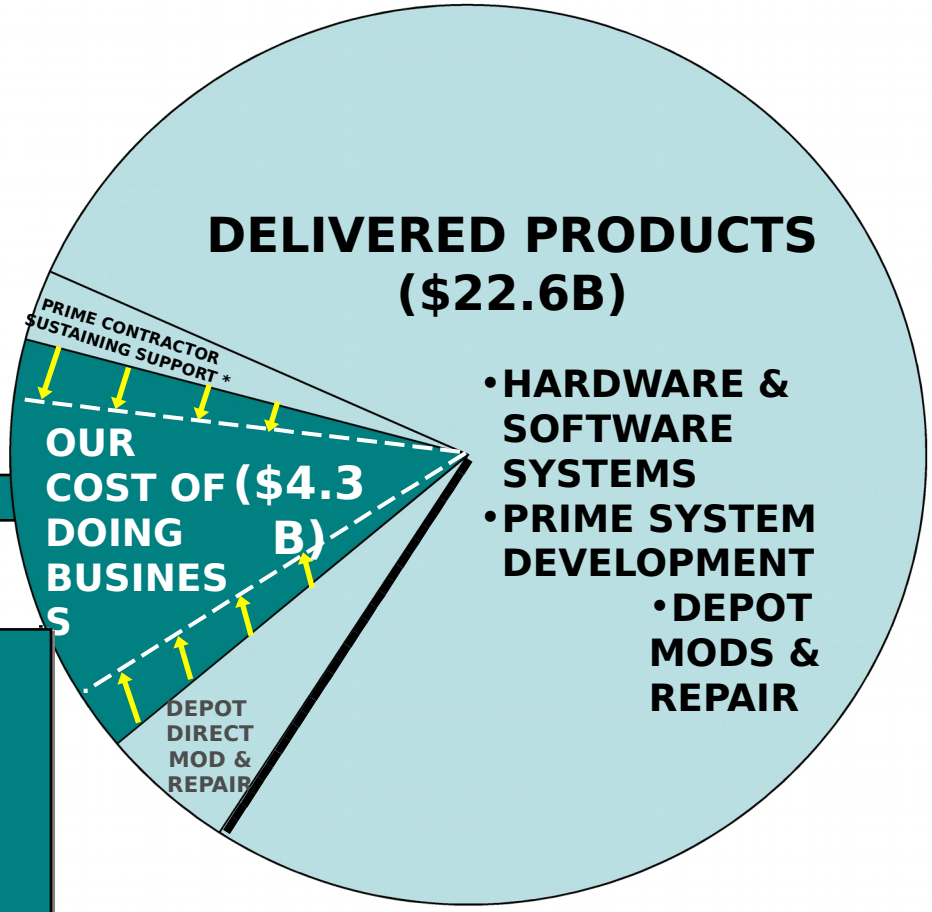
- $161M was saved over the FYDP

OUR OBJECTIVES AND ACCOUNTABILITIES
RETURN ON RESOURCES

FY05 BASELINE
TOTAL $26.9B

REDUCE COST OF DOING BUSINESS

- RETURN SAVINGS TO NAVY


DELIVERED PRODUCTS ($22.6B)
PRIME CONTRACTOR SUSTAINING SUPPORT *
OUR COST OF DOING BUSINESS ($4.3 B)
DEPOT DIRECT MOD & REPAIR
•HARDWARE & SOFTWARE SYSTEMS
•PRIME SYSTEM DEVELOPMENT
•DEPOT MODS & REPAIR

- INCLUDES ALL ORGANIC LABOR & MATERIAL COSTS
  - HQ / PEO SALARY & SUPPORT
  - NAVAL AIR WARFARE CENTERS (NAWCs)
  - DEPOTS (LESS DIRECT MOD & REPAIR)
- ALL CSS

* PRIME CONTRACTOR SUSTAINING SUPPORT EXAMPLES INCLUDE PRODUCTION LINE SUPPORT, ECPs, AND FLEET SUPPORT

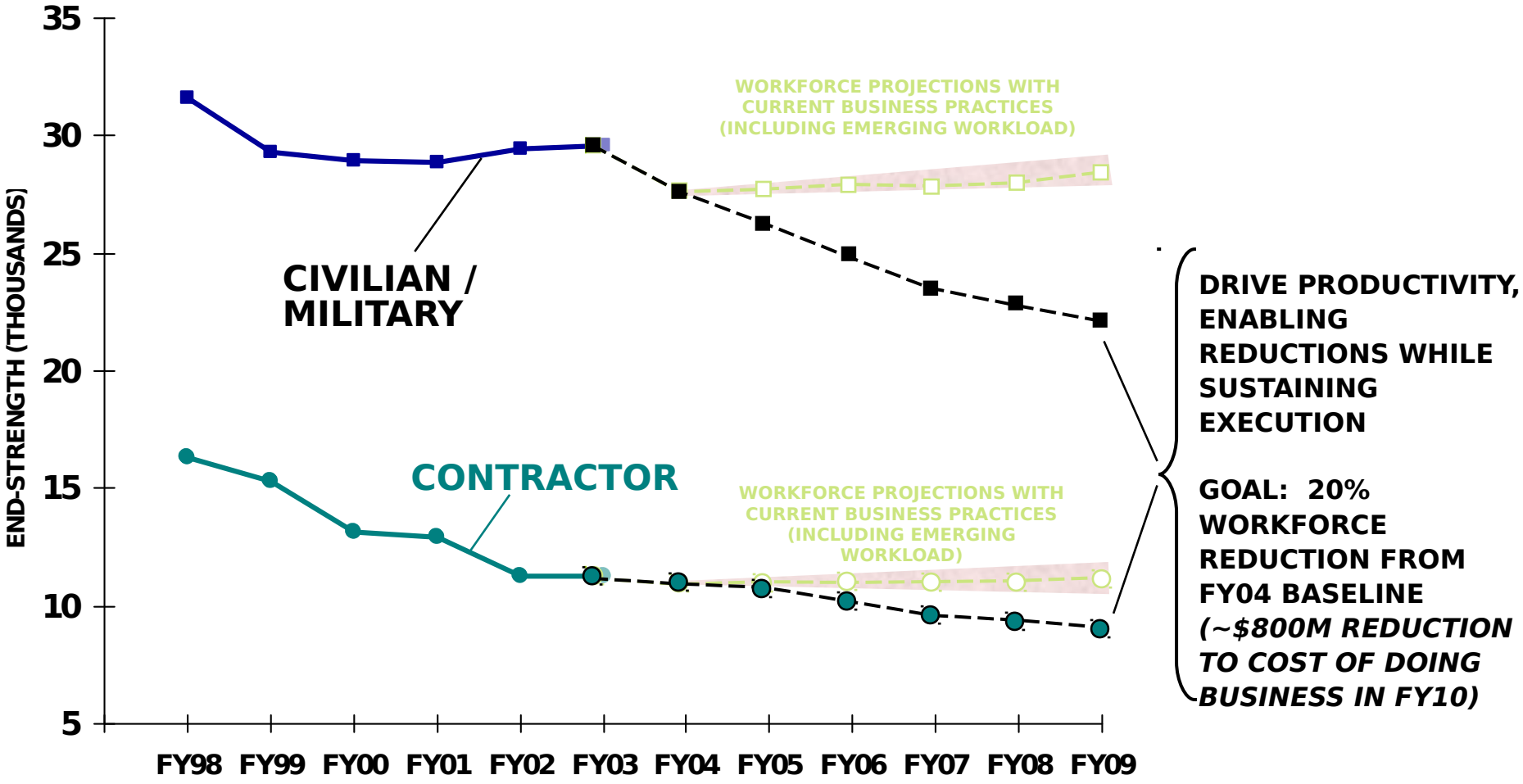
MAXIMIZE VALUE

- INCREASE THE SHARE OF RESOURCES PROVIDING TANGIBLE CAPABILITIES TO THE WARFIGHTER
- MAXIMIZE VALUE FOR EVERY DOLLAR SPENT

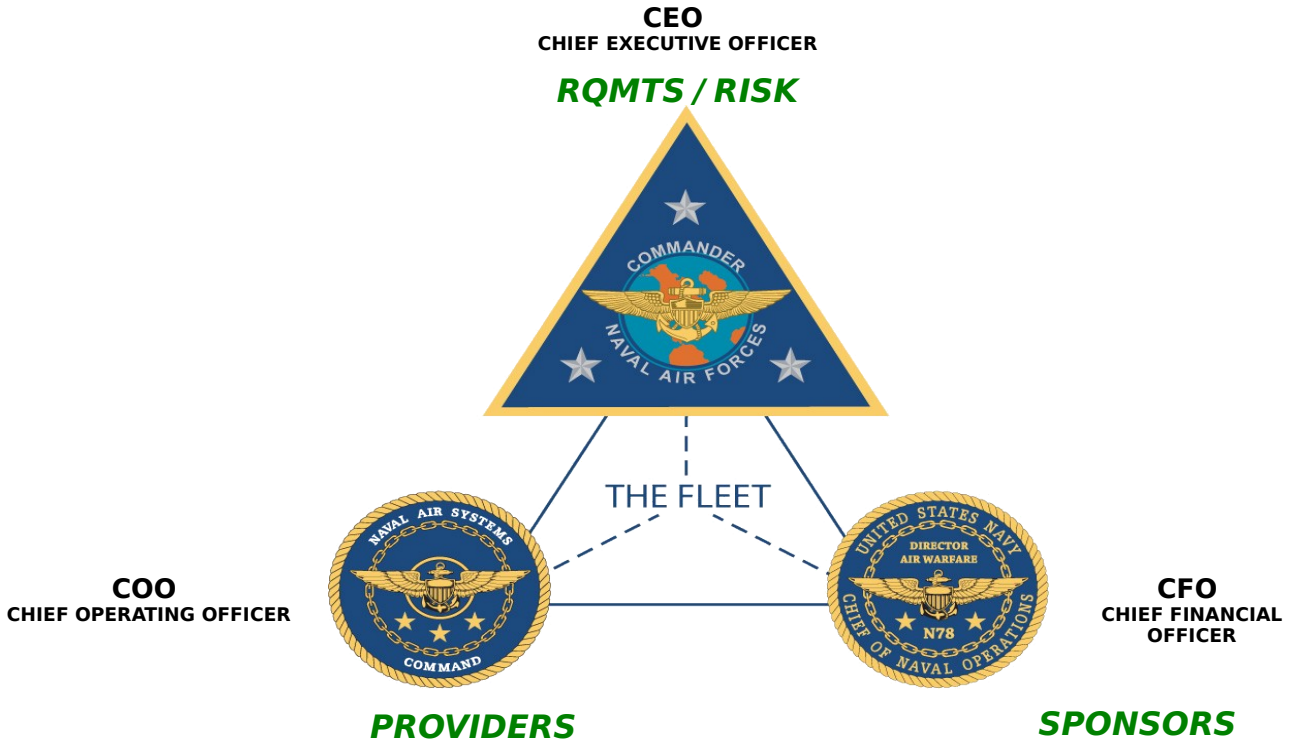
BALANCE COST, PRODUCTS, AND RISK

MANNING HISTORY / FORECAST
WHERE WE ARE HEADING *

ADD ACTUALS



THE NAVAL AVIATION ENTERPRISE …



This teaming model can work in any organization at any level.

OPERATING AS AN ENTERPRISE

- **SINGLE PROCESS OWNER (KEEPER OF THE METRIC)**
- **SINGLE FLEET-DRIVEN METRIC: *AVIATION UNITS READY FOR TASKING AT REDUCED COST* (CONTINUES TO MATURE)**
- **VALUES – WHAT WE BELIEVE**
  - **START WITH FLEET READINESS (EFFECTIVE)**
  - **"COST-WISE" (LESS $'S) (EFFICIENT)**
  - **TIME ON WING (LESS STUFF)**
  - **SPEED (LESS TIME IN MAINTENANCE)**
  - **PEOPLE (CONTINUOUS IMPROVEMENT)**
- **SUPPORTING METRIC**
  - **INVENTORY (PEOPLE, STUFF)**
  - **RELIABLITY**
  - **CYCLE TIME**
  - **TOTAL COST (ALL THE DOLLARS/ALL FINANCIAL STOVEPIPES)**
- **COSTS**
  - **DESIGN INTERFACE - FACILITIES**
  - **SUPPLY (CHAIN/SPARES) - SUPPORT EQUIPMENT**
  - **PHS&T - COMPUTER RESOURCES**
  - **MANPOWER - TRAINING**
  - **TECH DATA/TECH PUBS - MAINTENANCE PLANNING**
  - **PRODUCT SUPPORT - SUSTAINING ENGINEERING**

THE INSPIRATION

AIRCRAFT

	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
PB98	71	125	144	150	164								
PB99	71	119	143	154	164								
PB00		105	140	163	183	187	201						
PB01			128	130	173	177	187						
PB02				88	92	115	119	143	155				
PB03					90	85	105	147	193				
PB04						100	100	133	191	254	302		
PB05							108	134	183	238	283		
PB06								128	170	195	242	248	242

Flight Line NAS Lemoore, circa 2000

Air Force Times ***Daily Report eNewsletter***

Monday June 17, 2013

Navy Offers Airplane-Building Advice to USAF

The Navy has three times as many airplane projects in production or on the drawing board as the Air Force, and it's because of rigorous and painstaking efforts to reduce costs, Navy Secretary Ray Mabus said. Speaking with defense writers on June 13 in Washington, D.C., Mabus acknowledged his service is buying three variants of the F/A-18, two variants of the F-35, the P-8 patrol plane, V-22 tiltrotors, [H-60 R/S, AH-1Y/UH-1Z] and has both a new stealth remotely-piloted combat aircraft and a new-start advanced fighter underway. The Air Force, by contrast, is only buying F-35s and C-130Js. It also is preparing to buy tankers and has a bomber in the conceptual phase. Mabus said "we have done a good job, both in shipbuilding and aircraft programs" by using mature technology—"build the things you know how to build"— as well as should-cost methods, "firm fixed price contracts with incentives for bringing down cost and…overhead" and commercial derivatives "to the extent you can." Getting foreign partners to buy the same aircraft also helps reduce unit cost, he said. The big money-saver, though, has been multi-year contracts in which the service agrees to buy a certain number and the contractor, with solid numbers to plan for, can most efficiently buy materials, hire labor, and schedule work. "Smooth the program out," he advised, "then you're able to do stuff like this." He warned, however, that continued sequester would "start to break multi-years, which will mean you get fewer aircraft…for the same money." ***—John A. Tirpak***

Seapower Magazine

October 2013

“Maneuvering Room”

“Tactical Hard Deck”

“The Naval Aviation community was able to reduce the effects of sequestration in 2013 and meet its warfighting and forward presence commitments.

- Shutdown of carrier air wings was avoided, with only two reduced to minimum flight hours.
- Training of air crews was sustained and simulator use maximized.
- Some aircraft and engine procurement and overhauls, however, were affected by budget cuts.”

“ When the federal government failed to stop the budget sequester enacted by the Budget Control Act of 2011, Navy leaders assessed he potential impact of a ten percent across-the-board cut in fiscal 2013. The fiscal year ended on 30 September and the record shows that management by the Navy’s Aviation Enterprise at many levels significantly mitigated the negative effects of the sequester and enabled the naval aviation community to avoid drastic cuts in readiness.”***— Richard R. Burgess***

CRITICAL ENTERPRISE PROCESSES AND BEHAVIORS

1. **Identify Domains and assign Single Process Owners.**
2. **Assemble the right Enterprise teams and gain commitment .**
3. **Operate in support of a Single Fleet-Driven Metric *(what the Enterprise values).***
   - ✓ ***Agreement on scope, outputs, and linked metrics***
   - ✓ ***Transparency of data to promote trust and monitor performance***
   - ✓ ***Shared knowledge on issues and key problems affecting the Domain***
   - ✓ ***Recognize, nurture and respect technical authority***
   - ✓ ***Identified entitlements (what's needed, when, how much, and no more)***
4. **Agree on desired output (e.g., Readiness over Cost), with focus/ trade-space involving current and future readiness.**
5. **Operate with discipline, governance, and a regular (timely) drumbeat.**
6. **Baseline every dollar, all the people, all the stuff, and all the capability within the domain, with assigned accountability for outcomes.**
7. **Establish entitlements. Continually measure gaps-to-entitlement.**
8. **Remove barriers to productivity.**